Missouri High School Assessment Committee Recommendations: Rationale

Town Hall Meetings

This presentation summarizes recommendations submitted to the Missouri State Board of Education by the High School Assessment Committee. This program was used at a series of “town hall meetings” conducted by the Department of Elementary and Secondary Education during April 2006.

What assessment should be given to all high school students?

High School Assessment should reflect the following purposes:

- Measure and reflect student mastery toward postsecondary readiness
- Identify student's strengths and weaknesses; the assessment should be diagnostic and prescriptive
- Communicate expectations for all students to patrons and community
- Serve as the basis of the state and national accountability plan
- Enable school officials to evaluate programs

Preliminary Recommendations

By spring 2008, implement a new high school assessment program, based on the Show-Me Standards/GLEs, for Missouri. It should:

- Replace the current Missouri Assessment Program (MAP) exams in grades 10 and 11 (except for science)

- Be some form of a national, standardized college entrance exam that would measure students' readiness for postsecondary education and the workplace, and be given to all juniors
- Include a writing component for all students as part of the assessment in grade 11
- Retain the current state science exam, MAP, but re-evaluate its use in 5 years

The High School Assessment Committee also recommends that the State Board of Education endorse:

1. the use of a voluntary uniform transcript by Missouri public high schools, as soon as possible

2. the concept of competency-based assessments

3. the High School Assessment Committee also endorses the concept of a Workplace Readiness Certificate. That includes the "WorkKeys" assessments for Applied Math, Reading for Information and Locating Information

Why the Committee Endorsed a College Entrance Exam

- Aligned with state standards
- Measures growth on national scale
- Comparable and transportable
- Value to stakeholders
- Articulates higher education expectations with K-12 education
- Not all students need to go to college, but all students need college-like skills
- Increased access for underrepresented students
- Increased student motivation

Common Concerns

- **Will this change the instructional focus?**
- What performance data will schools receive?
- Accountability/Accreditation
- Norm-referenced assessment

Achieve., Inc.

Alignment analysis of the ACT to Missouri's Grade-Level Expectations for Mathematics and Communication Arts

In September 2004, DESE contracted with Achieve., Inc. to do an alignment study to determine the degree of alignment between the ACT and Missouri's grade-level expectations (GLEs), for grades 9-12 in communication arts, and grades 8-12 in mathematics, to help determine if the ACT could be used effectively to measure Missouri's Show-Me Standards at the high school level.

- **The ACT is designed to assess the knowledge and skills that students typically acquire prior to their senior year in high school.**

Achieve considered two fundamental questions:

1. Can all of the items on the ACT be mapped to a grade-level expectation?

2. To what degree are the knowledge and skills described by Missouri's standards addressed by the ACT?

Summary of Mathematics Alignment

58 of 60 ACT items did align with the GLEs.

- Content alignment = 85% significant alignment to 58 items
- Performance alignment = 93% significant alignment to 58 items

Achieve Recommendations: Math

- Missouri should give serious consideration to re-examining its GLEs with an eye toward making the wording of the expectations consistently clear and specific
- Missouri should consider an augmentation that includes constructed-response items

Summary of Communication Arts Alignment

105 of 115 ACT items in Reading and English did align with the GLEs

- Content alignment = 87% significant alignment to 105 items
- Performance alignment = 37% significant alignment to 105 items

Achieve Recommendations: Communication Arts

- Because Missouri standards call for students to produce writing rather than edit writing, the ACT should be augmented with a writing component

- Performance expectations in the GLEs are expressed in vague terms and should be refined to be more precise

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The ACT Reports Performance Information by:

- College Readiness Standards
- Missouri Show-Me Standards

Possible Prototype

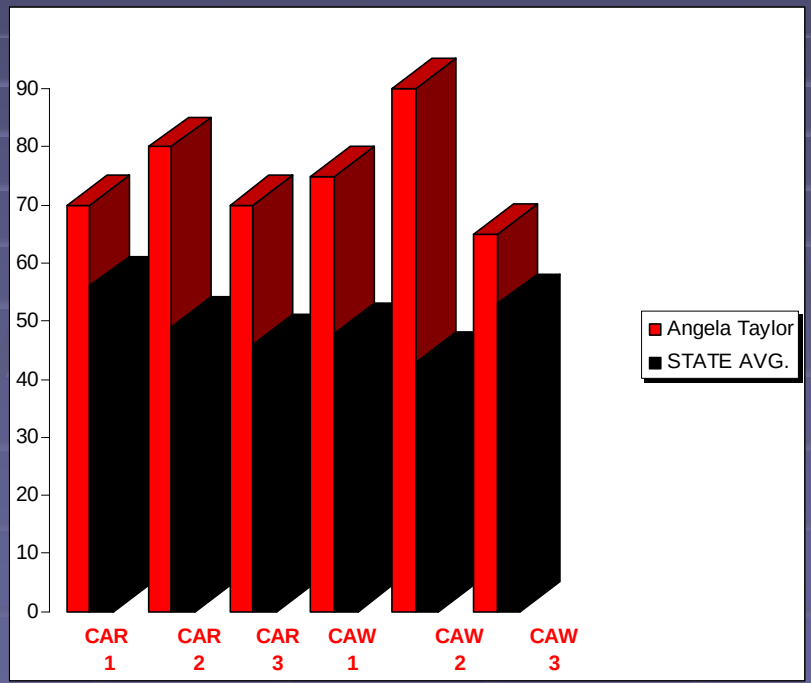
act assessment Missouri

Missouri Standards Report:
Communication Arts

Primary Use of this report:

- Use domain scores based on the ACT English, Writing, and Reading Tests to evaluate student achievement on Missouri Communication Arts Standards

Student Report for
Angela C. Taylor
Missouri High School
Sample Town, MO
Test Date: Spring 2007



Reading Process (CAR 1)

Reading Fiction (CAR 2)

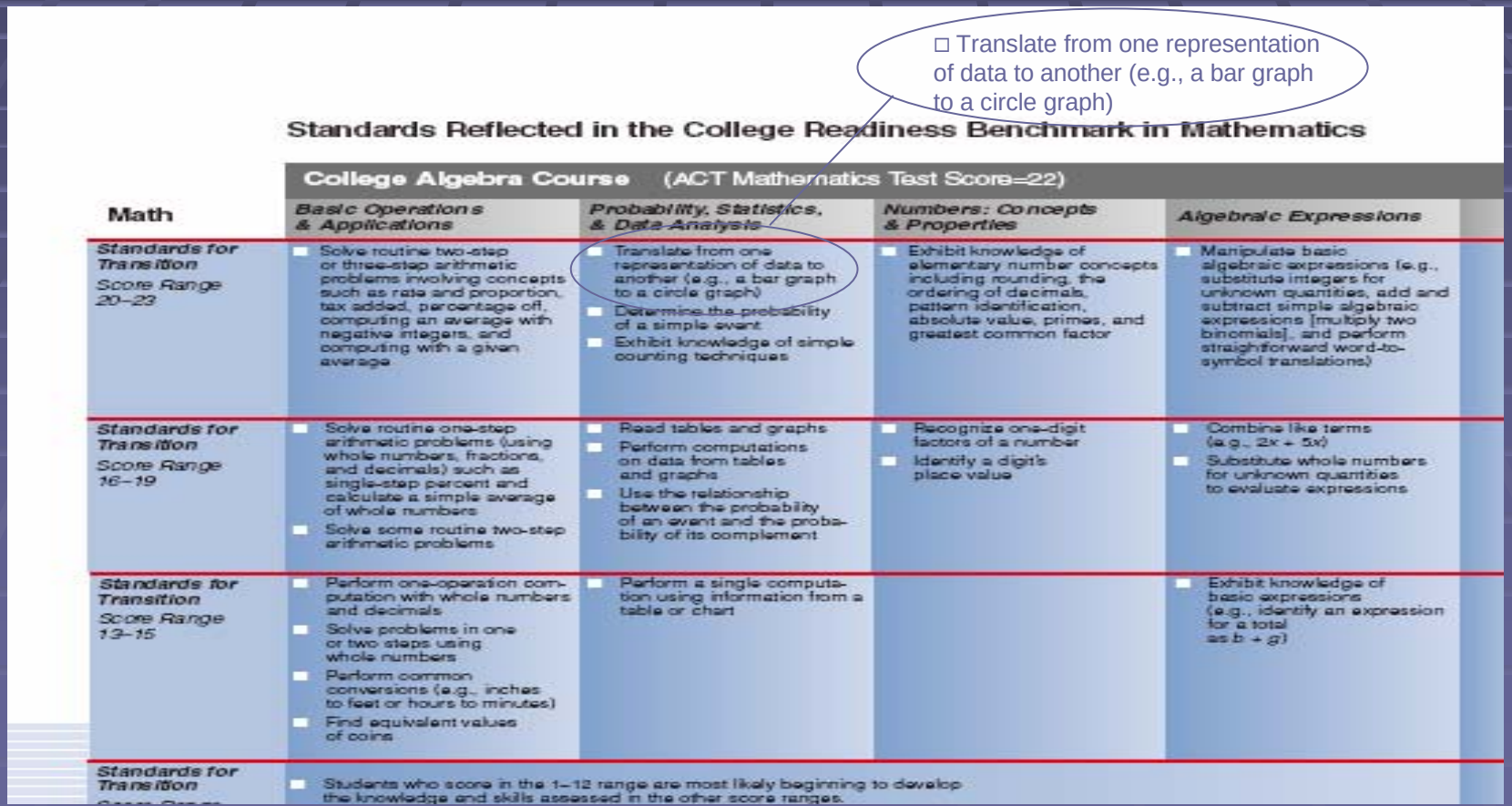
Reading NonFiction (CAR 3)

Writing Process (CAW 1)

Writing Conventions (CAW 2)

Types of Writing (CAW 3)

Example of a College Readiness Standard



□ Translate from one representation of data to another (e.g., a bar graph to a circle graph)

Standards Reflected in the College Readiness Benchmark in Mathematics

College Algebra Course (ACT Mathematics Test Score=22)

Math	*Basic Operations & Applications*	*Probability, Statistics, & Data Analysis*	*Numbers: Concepts & Properties*	*Algebraic Expressions*
Standards for Transition *Score Range 20–23*	■ Solve routine two-step or three-step arithmetic problems involving concepts such as rate and proportion, tax added, percentage off, computing an average with negative integers, and computing with a given average	■ Translate from one representation of data to another (e.g., a bar graph to a circle graph) ■ Determine the probability of a simple event ■ Exhibit knowledge of simple counting techniques	■ Exhibit knowledge of elementary number concepts including rounding, the ordering of decimals, pattern identification, absolute value, primes, and greatest common factor	■ Manipulate basic algebraic expressions (e.g., substitute integers for unknown quantities, add and subtract simple algebraic expressions [multiply two binomials], and perform straightforward word-to-symbol translations)
Standards for Transition *Score Range 16–19*	■ Solve routine one-step arithmetic problems (using whole numbers, fractions, and decimals) such as single-step percent and calculate a simple average of whole numbers ■ Solve some routine two-step arithmetic problems	■ Read tables and graphs ■ Perform computations on data from tables and graphs ■ Use the relationship between the probability of an event and the probability of its complement	■ Recognize one-digit factors of a number ■ Identify a digit's place value	■ Combine like terms (e.g., $2x + 5x$) ■ Substitute whole numbers for unknown quantities to evaluate expressions
Standards for Transition *Score Range 13–15*	■ Perform one-operation computation with whole numbers and decimals ■ Solve problems in one or two steps using whole numbers ■ Perform common conversions (e.g., inches to feet or hours to minutes) ■ Find equivalent values of coins	■ Perform a single computation using information from a table or chart		■ Exhibit knowledge of basic expressions (e.g., identify an expression for a total as $b + g$)
Standards for Transition	■ Students who score in the 1–12 range are most likely beginning to develop the knowledge and skills assessed in the other score ranges.			

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Accreditation/AYP

Current High School MAP	=	National Standardized Test (Terra Nova)	+ Augmentation (MO Written Items)

Aligned to Show-Me Standards

Recommended High School Assessment	=	National Standardized College Entrance Exam (ACT)	+ Writing Assessment

Aligned to Show-Me Standards

MSIP

<u>9-11 Mathematics</u>

ACT Mathematics Scale Score = MSIP Achievement Level

<u>9-11 Communication Arts</u>

ACT Reading & English Scale Scores + Writing Assessment Scale Score = MSIP Achievement Level

<u>9-11 Science</u>

MAP Achievement Level

Accommodations

- Consistent with those that apply on national ACT test dates
- Accommodations policies would be similar to current MAP testing
- Test results might not be reported to colleges due to accommodations but would still be used for school/district accountability

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Terra Nova ® vs. ACT

All MAP exams now include a national standardized test :

Terra Nova®

ACT would replace this component in the high school assessment

COST?

Based on payments for current testing

The projected increase in cost would be approximately $1.5 million

Uncertain how the bidding process will affect this estimate.